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#20
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Nitin J. Shah

Serial No.: 09/082,044

Filed: May 20, 1998

For: SYSTEM AND METHOD FOR DENOTING AND COMMUNICATING
WITH COMPUTER NETWORK MOBILE SITES

Group No.: 2155

Examiner: Khanh Dinh

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Sirs:

APPELLANT'S BRIEF UNDER 37 C.F.R. §1.192

This is an appeal from a Final Rejection dated February 27, 2001, of Claims 1, 3-8, 10-15 and 17-21. The Appellants submit this Brief in triplicate as required by 37 C.F.R. §1.192(a), with the statutory fee of \$310.00 as set forth in 37 C.F.R. §1.17(c), and hereby authorize the

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Commissioner to charge any additional fees connected with this communication or credit any overpayment to Deposit Account No. 12-2325.

This Brief contains these items under the following headings, and in the order set forth below in accordance with 37 C.F.R. §1.192(c):

- I. REAL PARTY IN INTEREST
- II. RELATED APPEALS AND INTERFERENCES
- III. STATUS OF CLAIMS
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I. REAL PARTY IN INTEREST

The real party in interest in this appeal is the Assignee, Lucent Technologies, Inc.

II. RELATED APPEALS AND INTERFERENCES

No other appeals or interferences will directly affect, be directly affected by, or have a bearing on the Board's decision in this appeal.

III. STATUS OF THE CLAIMS

Claims 1, 3-8, 10-15 and 17-21 are pending in this Application.

IV. STATUS OF THE AMENDMENTS

The present Application was filed on May 20, 1998. The Appellants filed a first Amendment on January 28, 2000, in response to an Official Action mailed November 10, 1999. The Examiner entered the first Amendment and subsequently issued a Final Official Action on April 2, 2000. The Appellants then filed a second Amendment on May 5, 2000. The Examiner indicated in an Advisory Action mailed May 16, 2000, that the second Amendment did not place the Application in condition for allowance. The Appellants then filed a Request for Continued Examination on June 12, 2000. The Examiner mailed another Official Action on August 29, 2000, and, in response, the Applicant filed an Amendment on November 29, 2000. The Examiner then mailed a Final Official Action on February 27, 2001, and, in response, the Applicant filed an Amendment on April 27, 2001. The Examiner mailed an Advisory Action on May 22, 2001, indicating that the fourth Amendment did not place the Application in condition for allowance. The Applicant filed a Notice of Appeal on May 29, 2001.

V. SUMMARY OF THE INVENTION

The present invention is directed, in general, to computer networks and, more specifically, to a system and method for denoting and communicating with computer network mobile sites and a computer network incorporating the system or the method.

In one embodiment, the present invention provides a system for, and method of, denoting and communicating with a mobile site wirelessly couplable to a computer network site and a computer network incorporating the system or the method. In one embodiment, the system includes: (1) an address parser (which may take the form of a domain name parser) that makes a determination of whether the site is the mobile site or a fixed site of the computer network, (2) a mirror site, couplable to the computer network, that contains a time-delayed copy of data present at the mobile site; and (3) a communications manager that manages communication with the site based on the determination, where the communications manager directs the communication, when the site is a mobile site, either to the mobile site when the mobile site is in wireless communication with the computer network or to the mirror site when the mobile site is out of wireless communication with the computer network.

The present invention therefore introduces the broad concept of managing the communications that may occur between a computer network and a mobile site thereof at the network. This can substantially reduce the amount of data the wireless link between the network and the site has to carry. The communications manager preferably only manages communications pertaining to one or more mobile sites. Therefore, in one embodiment, the communications manager only acts when the address parser determines, with reference to a site's address (or, more specifically, all or a part of a site's domain name), that a site is a mobile site.

IN THE ENVIRONMENT OF A PREFERRED EMBODIMENT

An embodiment of the present invention is illustrated in FIGURE 1 of the present Application (set forth herein as Illustration 1). Illustration 1 illustrates a system 100 for denoting and communicating with a computer network site constructed according to the principles of the present invention. The system 100 includes a computer network site 105, a domain name parser 125 (one type of an address parser), a communications manager 135, a mirror site 140, a base station 145 and a mobile site 155 as part of a computer network. The system 100 provides a system for, and method of, denoting and communicating with the computer network site 105 and the remainder of the computer network.

The domain name parser 125 makes a determination of whether the site is a mobile site from a domain name of the site. The domain name parser 125 may make the determination of whether the site is the mobile site 155 from a top level domain name of the site. Current top-level domain names include ".com," ".gov," ".edu" and ".net" as previously discussed. A top-level domain name of ".mob" may also be employed to denote mobile sites. Of course, the present invention is not so limited. The domain name parser may be an address parser, parsing the address of the site, rather than its corresponding domain name.

The communications manager 135 manages communication with the mobile site 155 based on the determination. The domain name parser 125 and the communications manager 135 may be associated with the Internet. Those skilled in the art will perceive, however, that the principles of the present invention are fully employable with respect to other types of networks, including LANs and WANs.

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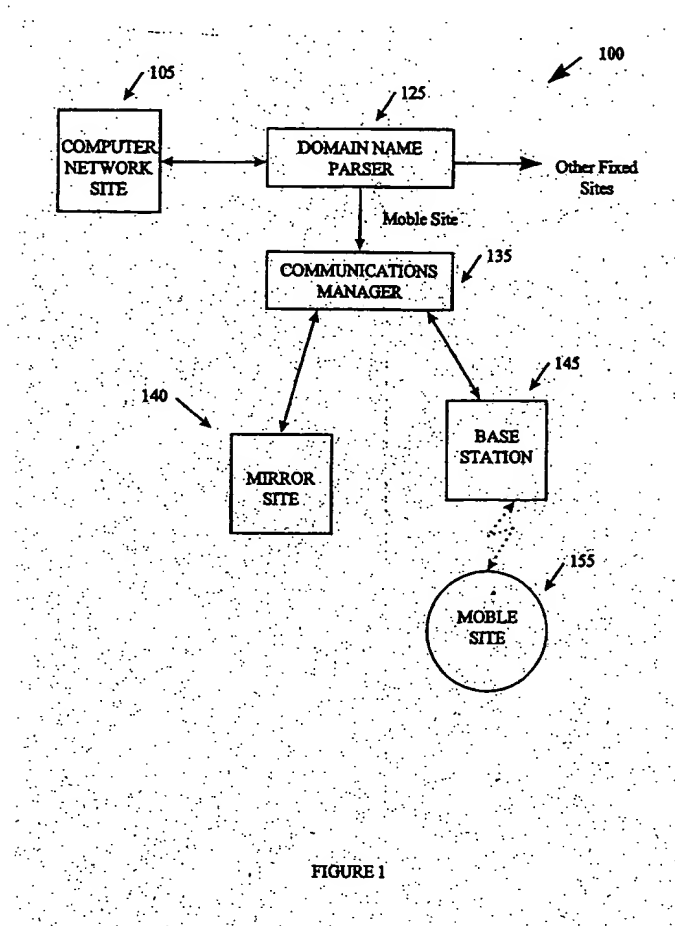


Illustration 1

The base station 145 and the mirror site 140 work in conjunction with the communications manager 135 to appropriately manage the mobile site 155. The base station 145 provides the wireless link to the mobile station 155 and may communicate with a plurality of mobile sites. The mirror site 140 is unique to the mobile site 155 in that it reflects only the data contained in it. However, in other embodiments, the mirror site 140 may combine data from several mobile sites as a situation may warrant.

Thus, this embodiment of the present invention provides for managing the communications that may occur between a computer network and the mobile site 155 thereof. This can substantially

reduce the amount of data that the wireless link between the network and the site has to carry. In this embodiment of the present invention, the communications manager 135 only acts when the domain name parser 125 determines, with reference to a site's domain name, that a site is a mobile site.

The communications manager 135 may redirect the communications to the mirror site 140 when the site is mobile since the mobile site 155 may not be available. The mirror site 140 is intended to always be available for communication and contains a copy, although perhaps a time-delayed copy, of the data present at the mobile site 155. To the extent that the communications can be made to occur with the mirror instead of the mobile site 155 itself, wireless bandwidth is saved.

The communications manager 135 may prompt the mobile site 155 to update the mirror site 140. Given the practical difficulties with continuous mirror updating, it is advantageous that the mobile site 155 update the mirror site 140 occasionally. Alternately, the communications manager 135 may periodically prompt the mobile site 155 to update the mirror site 140. Of course, the mobile site 155 itself can update the mirror site 140 without prompting by the communications manager 155, perhaps based on time or a revision of data present at the mobile site 155.

Additionally, the communications manager 135 may buffer the communications to accommodate a lower bandwidth with the mobile site 155. The communications manager 135 may employ an alternative, relatively low bandwidth protocol to repackage the communications for wireless transmittal. The communications manager 135 may also acknowledge the communications to the mobile site 155. This saves wireless bandwidth by freeing the wireless link of acknowledgment messages.

VI. ISSUES

The first issue presented for consideration in this appeal is whether Claims 1, 3, 5-8, 10, 12-15, 17 and 19-21, as rejected by the Examiner, are patentably nonobvious in accordance with 35 U.S.C. §103(a) over U.S. Patent No. 6,003,030 to Kenner (Kenner) in view of U.S. Patent No. 5,845,079 to Wada *et al.* (Wada). The second issue presented in this appeal is whether dependent Claims 4, 11 and 18, as rejected by the Examiner, are patentably nonobvious in accordance with 35 U.S.C. §103(a) over Kenner and Wada, as applied to independent Claims 1, 8 and 15, above, and further in view of U.S. Patent No. 5,963,862 to Adiwoso *et al.* (Adiwoso).

VII. GROUPING OF THE CLAIMS

Claims 1, 3-8, 10-15 and 17-21 do not stand or fall together. Claims 1 and 3-7 form a first group, Claims 8 and 10-14 form a second group, and Claims 15 and 17-21 form a third group.

VIII. PRIOR ART

A. U.S. Patent No. 6,003,030 to Kenner.

Kenner is directed to the optimized storage and retrieval of video data at distributed sites throughout a computer network, such as the Internet. Kenner introduces the concept of "Smart Mirror" sites, each of which contain a copy of certain data to which a user may wish to gain access. Each user pre-configures his terminal for subsequent downloads by conducting a fairly extensive analysis of network performance with respect to each Smart Mirror site. Smart Mirror sites are then prioritized based on this performance analysis, allowing a particular Smart Mirror site to be later selected to optimize downloading speed of the sought data. Thus, Kenner's fundamental emphasis and motivation is the efficiency and speed of data transfer through a network.

The essence of Kenner may be seen in his FIG. 2 (set forth herein as Illustration 2). As can be seen, Kenner's "configuration utility" retrieves a delivery site file (step 40).

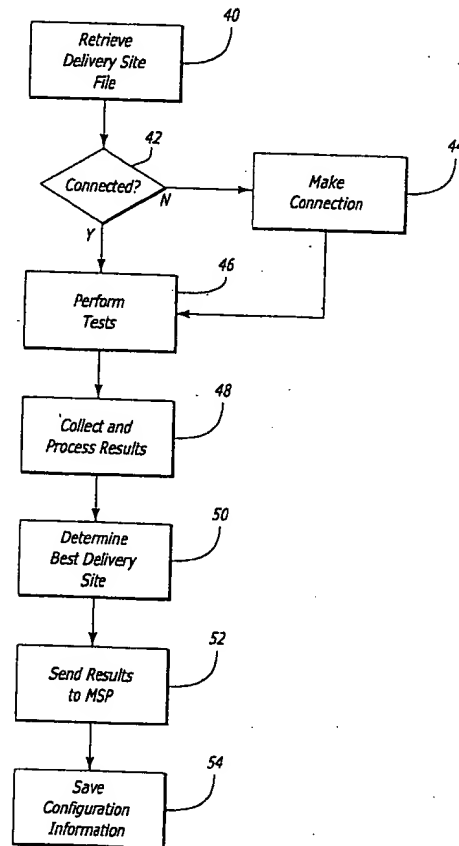


FIG. 2

Illustration 2

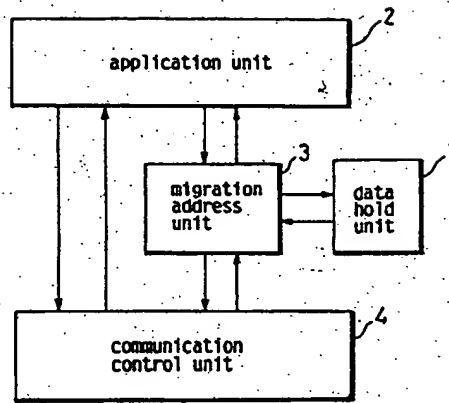
This delivery site file contains a list of all delivery sites having the desired file available for download, as well as a list of network tests to be run at the user's terminal. The configuration utility then determines whether the user terminal is connected to a communications network(step 42). If not, it will initiate a connection (step 44) or prompt the user to do so. A series of network tests is then performed (step 46) for available sites listed in the delivery site file. After all specified tests are run, the results are collected and processed (step 48). Then, the site most efficient in delivering

the desired file is determined, based primarily on the tests performed earlier (step 50). After a "Smart Mirror" site is selected based on the tests, certain data will be sent to a "mirror service provider" (MSP) (step 52) via e-mail or other Internet electronic protocol. User information, the identity of the selected Smart Mirror site, and all raw test data and results, are compiled into a text file. Upon receipt by the MSP 32, the data is stored in a database for use in managing and analyzing the system. Finally, the configuration utility saves the identity of the selected Smart Mirror site for each set of delivery sites, or the prioritized list, to the configuration file (step 54).

B. U.S. Patent No. 5,845,079 to Wada.

Wada teaches a mobile migration communication control device that is available to any apparatus on existing networks. Wada allows continuous communication between a mobile node and a node unaffected by the mobile node's migration and also includes a migration post transmission unit. Specifically, with reference to FIG. 1 of Wada (set forth herein as Illustration 3), illustrated is a migration communication control device comprising a data hold unit 1, an application unit 2, a migration address unit 3 and a communication control unit 4. The data hold unit 1 holds addresses of a mobile host by corresponding them. Each of the addresses in the data hold unit 1 is assigned before and after a migration of the mobile host. The application unit 2 checks a connection, as well as monitors a timer. The migration address unit 3 processes a migration address by reference to data in the data hold unit 1. The concrete operation of the migration address unit 3 varies

FIG. 1



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Illustration 3

depending on the type of migration communication control device comprising the migration address unit 3. Then, the communication control unit 4 actually controls the communication of the migration communication control device. Each device comprising the unit 1 and 3 supports a continuous communication unaffected by migration of the mobile host besides providing its own function.

C. U.S. Patent No. 5,963,862 to Adiwoso

Adiwoso teaches an integrated telecommunications system providing fixed and mobile satellite-based services. Looking at FIG. 1 of Adiwoso (set forth herein as Illustration 4), a conceptual diagram of Adiwoso's telecommunications system is shown, and includes a single telecommunications satellite 12 positioned in geosynchronous orbit above the Earth and having a set of transponders 14 that provide uplinks and downlinks to Earth-based stations. A standard

satellite control facility (SCF) 52 is employed to maintain the position and orientation of the satellite in space relative to a region of the earth. One of the functions of telecommunications satellite 12 is to provide single or multi-beam user links 25 that connect directly with user terminals 20, which are located at various user premises on the ground. The satellite 12 also provides single or multi-beam access links 45 that connect with gateway stations 30a and a network control center (NCC) 50 at access link frequencies.

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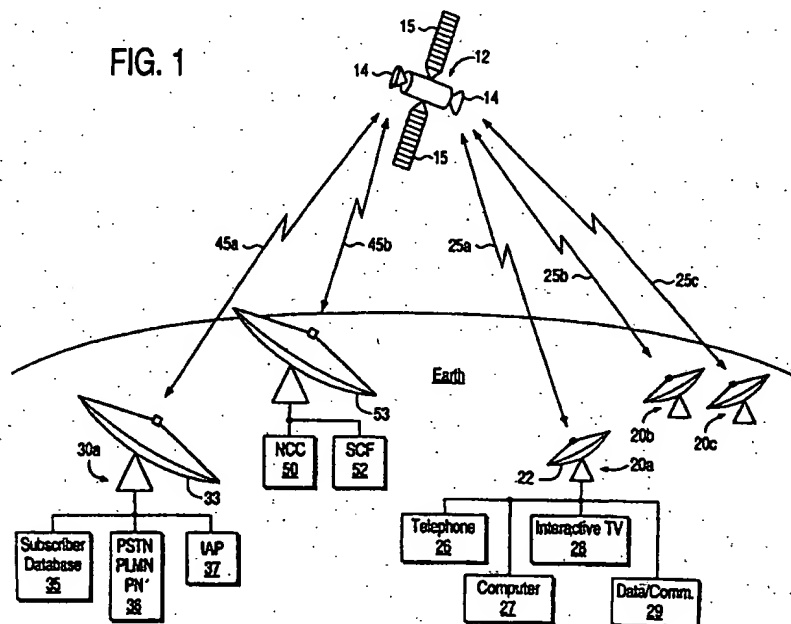


Illustration 4

In the embodiment in Illustration 4, each of the gateways 30a is coupled to a subscriber database 35 that stores user information. One or more of the gateway stations 30a may also include a direct connection to terrestrial-based telecommunications networks, for example, a direct connection to various land-based networks represented by block 36 representing public switched telephone networks (PSTNs), public land mobile networks (PLMNs), and private networks (PNs).

Additionally, gateway 30a may provide a high-speed, broadband connection that allows user terminals to access information available on the Internet. In one example, this service is available via an Internet access point (IAP) 37 connection. In addition, user terminal 20a is shown being coupled to a variety of multi-media devices. These include a telephone 26, computer 27, interactive television 28, and data telecommunications device 29.

IX. THE APPELLANTS' ARGUMENTS

The inventions set forth in independent Claims 1, 8 and 15 and their respective dependent claims are not obvious over the references on which the Examiner relies. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is a teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. *In re Fine*, 5 U.S.P.Q. 2d 1596 (1998). The motivation to combine references may "... come from the nature of a problem to be solved, leading inventors to look for references relating to possible solutions to that problem." *Pro-Mold and Tool Company v. Great Lakes Plastics Inc.* 37 U.S.P.Q.2d 1626, 1630 (1996). However, hindsight is never appropriate motivation for combining references. To this end, relying upon hindsight knowledge of the Appellant's disclosure when the prior art does not teach nor suggest such knowledge, results in the use of the invention as a template for its own reconstruction. This is inappropriate in the determination of patentability. *Sensonics Inc. v. Garlock, Inc.* 220 U.S.P.Q. 303, 312-313 (1983). With this in mind, the individual rejections are set forth and specifically discussed below.

A. Rejection of Claims 1, 3, 5-8, 10, 12-15, 17 and 19-21 under 35 U.S.C. § 103.

Claims 1, 3, 5-8, 10, 12-15, 17 and 19-21 have been rejected by the Examiner as obvious over Kenner in view of Wada. As set forth above, Kenner is directed to the optimized storage and retrieval of video data at distributed sites throughout a computer network, such as the Internet, using what Kenner terms "Smart Mirror" sites, each of which contain a copy of certain data to which a user may wish to gain access. However, Kenner does not teach (1) an address parser that makes a determination of whether a site is a mobile site or a fixed site, (2) a mirror site that contains a time-delayed copy of data present at the mobile site or (3) a communications manager that manages communication with the site based on the determination of whether that site is a mobile site or a fixed site, such that, when the site is a mobile site, the manager directs the communication either to the mobile site when the mobile site is in wireless communication with the computer network or to the mirror site when the mobile site is out of wireless communication with the computer network.

More specifically, Kenner does not suggest determining whether a site is fixed or mobile, since Kenner is preoccupied with speed/performance, regardless of how the site was physically embodied. Also, Kenner does not suggest that a mirror site contains a time-delayed copy of a particular file, since Kenner's underlying assumption is that a user merely wants a particular file (e.g., video clip) and does not care from which site it may come. Furthermore, because Kenner's emphasis is on speed, there is also no suggestion in Kenner for downloading from a mirror site only when the mobile site is unavailable. To this end, one who is skilled in the art following the teachings of Kenner would choose the faster of either the mobile or the mirror sites, regardless of whether or not the mobile site is in wireless communication. Specifically, if it were faster, Kenner would choose the mirror site every time, even though its copy is not as recent and even though the mobile site is in wireless communication.

Although the Examiner relies on the combination of Kenner with Wada, Wada does not cure the deficiencies of Kenner. Specifically, Wada does not teach a communication manager that directs communication to a mobile site when the mobile site is available or to a mirror site of the mobile site when the mobile site is unavailable. In fact, Wada does not teach or suggest a mirror site couplable to a computer network, and, therefore, provides no structure that would support mirroring. Where Kenner tests available mirror sites and prioritizes them for downloads based on speed, Wada is primarily concerned with constant communication with mobile sites. As a result, one who is skilled in the art would find no motivation to combine Kenner with Wada in an attempt to arrive at the inventions of Claims 1, 8 and 15.

Moreover, although the Examiner has asserted that Wada teaches a communication manager (communication control unit 4 of FIG. 2 and FIG. 3 in Wada) that manages communication with site based on, in part, when a mobile site is available in wireless communication with a network or is out of wireless communication with the network, the Applicant can find no mention of a wireless communication in Wada. The columns and Figures in Wada on which the Examiner has relied merely disclose "mobile nodes." However, these "mobile nodes" are not a mobile site that may be in wireless communication with a computer network, as recited in Claims 1, 8 and 15 of the present Application.

In conclusion, the combination of Kenner and Wada fails to teach or suggest the inventions recited in independent Claims 1, 8 and 15, and, therefore, do not establish a *prima facie* case of obviousness of these claims. Because Claims 3-7, 10-14 and 17-21 are dependent upon Claims 1, 8 and 15, respectively, the combination of Kenner and Wada also does not render obvious these dependent claims. The Applicant, therefore, respectfully asserts that Claims 1, 3-8, 10-15 and 17-21 are not obvious in view of Kenner and Wada.

B. Rejection of Claims 4, 8 and 11 under 35 U.S.C. §103

The Examiner has also rejected dependent Claims 4, 11 and 18 as obvious over Kenner and Wada, as applied to independent Claims 1, 8 and 15 above, and further in view of Adiwoso. Claims 4, 11 and 18 are dependent claims, which depend from independent Claims 1, 8 and 15, respectively. As the Board is no doubt aware, dependent claims include all of the limitation of the independent claims from which they depend. Thus, if an independent claim is patentable over cited references, then the claims's dependent claims are necessarily patentable over the same references.

As previously discussed, the combination of Kenner and Wada fails to teach or suggest the inventions recited in independent Claims 1, 8 and 15, and, therefore, do not establish a *prima facie* case of obviousness of these claims. In addition, one who is skilled in the art would not be motivated to combine Kenner and Wada in an attempt to arrive at the claimed inventions, since Kenner is concerned with prioritizing sites on the basis of speed, while Wada is concerned with constant communication with mobile sites; two entirely different goals. As presented, Adiwoso also does not teach nor suggest the above-discussed elements of independent Claims 1, 8 and 15. Rather, the Examiner merely relies on Adiwoso for the proposition that buffering is known. While , the Applicant agrees that buffering as a general concept is known, the Applicant asserts that buffering in the context of the management of mobile sites, as specifically recited in Claims 4, 11 and 18, is not known. Irrespective of whether Claims 4, 11 and 18 recite patentable subject matter, when read to include all the elements of their base claims, Adiwoso still does not cure the deficiencies in the combination of Kenner and Wada, with respect to the inventions of Claims 1, 8 and 15. Therefore, any rejection based on the combination of Kenner, Wada and Adiwoso fails to establish a *prima facie* case of obviousness of Claims 1, 8 and 15. As such, Claims 4, 11 and 18 are not obvious in view of Kenner, Wada and Adiwoso.

For the reasons set forth above, the claims on appeal are patentably nonobvious over Kenner, Wada and Adiwoso. Accordingly, the Appellant respectfully requests that the Board of Patent Appeals and Interferences reverse the Examiner's Final Rejection of all of the Appellant's pending claims.

Respectfully submitted,

HITT GAINES & BOISBRUN, P.C.

A handwritten signature in black ink, appearing to read 'D. Hitt', with a large circular flourish at the beginning.

David H. Hitt
Registration No.33,182

Dated: FEBRUARY 4, 2002

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X. APPENDIX A - CLAIMS

1. A system for denoting and communicating with a mobile site wirelessly couplable to a computer network, comprising:

an address parser that makes a determination of whether a site is said mobile site or a fixed site of said computer network;

a mirror site, couplable to said computer network, that contains a time-delayed copy of data present at said mobile site; and

a communications manager that manages communication with said site based on said determination, said communications manager directing said communication, when said site is a mobile site, either to said mobile site when said mobile site is in wireless communication with said computer network or to said mirror site when said mobile site is out of wireless communication with said computer network.

2. [Claim 2 has been canceled without prejudice or disclaimer]

3. The system as recited in Claim 1 wherein said communications manager prompts said site to update said mirror site.

4. The system as recited in Claim 1 wherein said communications manager buffers said communications to accommodate a lower bandwidth when said site is a mobile site.

5. The system as recited in Claim 1 wherein said address parser makes said determination of whether said site is said mobile site from a top level domain name of said site.

6. The system as recited in Claim 1 wherein said communications manager acknowledges said communications to said mobile site.

7. The system as recited in Claim 1 wherein said address parser and said communications manager are associated with the Internet.

8. A method of denoting and communicating with a mobile site wirelessly coupleable to a computer network, comprising:

making a determination of whether said site is said mobile site or a fixed site of said computer network; and

managing communication with said site based on said determination, where said communications managing includes directing said communication, when said site is a mobile site, either to said mobile site when said mobile site is in wireless communication with said computer network or to a mirror site of said mobile site when said mobile site is out of wireless communication with said computer network, said mirror site containing a time-delayed copy of data present at said mobile site.

9. [Claim 9 has been canceled without prejudice or disclaimer]

10. The method as recited in Claim 8 wherein said managing comprises prompting said site to update said mirror site.

11. The method as recited in Claim 8 wherein said managing comprises buffering said communications to accommodate a lower bandwidth when said site is a mobile site.

12. The method as recited in Claim 8 wherein said making comprises making said determination of whether said site is said mobile site from a top level domain name of said site.

13. The method as recited in Claim 8 wherein said managing comprises acknowledging said communications to said mobile site.

14. The method as recited in Claim 8 wherein said making and managing are carried out over the Internet.

15. A computer network, comprising:
fixed sites having fixed-site domain names associated therewith;
mobile sites having mobile-site domain names associated therewith;
a communications infrastructure that couples ones of said pluralities of fixed and mobile sites for communication therebetween;

an address parser that makes a determination of whether a site is one of said mobile sites or one of said fixed sites;

a mirror site, couplable to said computer network, that contains a time-delayed copy of data present at said mobile site; and

a communications manager that manages communication with said site based on said determination, said communications manager directing said communication, when said site is a

mobile site, either to said mobile site when said mobile site is in wireless communication with said computer network or to said mirror site when said mobile site is out of wireless communication with said computer network.

16. [Claim 16 has been canceled without prejudice or disclaimer]

17. The computer network as recited in Claim 15 wherein said communications manager prompts said site to update said mirror site.

18. The computer network as recited in Claim 17 wherein said communications manager buffers said communications to accommodate a lower bandwidth when said site is a mobile site.

19. The computer network as recited in Claim 15 wherein said address parser determines whether said site is said fixed site or said mobile site from a top level domain name of said site.

20. The computer network as recited in Claim 15 wherein said communications manager acknowledges said communications relayed by said communications infrastructure to said mobile site.

21. The computer network as recited in Claim 15 wherein said communications infrastructure is the Internet.